

1999 ANNUAL DRINKING WATER QUALITY REPORT

City of Bedford Municipal Water System

Meets all drinking water standards

Is continuously tested

Is safe to drink

The City of Bedford Water Treatment System is pleased to present to you this Annual Drinking Water Quality Report for 1999. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the safety and quality of your water.

TYPE AND SOURCE OF OUR WATER SUPPLY

Our main water source is the Stoney Creek Reservoir located on Rt. 640 in Bedford County, which is a surface water source. We have a supplemental source that is used presently during periods of dry weather and could be utilized in the future as demand increases. This surface water source is located at the head of Big Otter River, off Route 43 North, in the Kelso area of Bedford County. As the present time we monitor the drainage areas of our source water for types of operations that may contribute contaminants. This source water protection will receive more attention in the future as a result of the Safe Drinking Water Act. The Virginia Department of Health will be completing an assessment of the drainage area for our source water and any future development of the drainage areas of our source water will be monitored.

STRIVING FOR EXCELLENCE

We are pleased to report that our drinking water is safe and meets federal and state requirements. This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact your Water Treatment Facility Superintendent at 586-7197 during the hours of 8:00 a.m. to 4:00 p.m., Monday through Friday. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled council meetings. They are held on the second and fourth Tuesday at 7:30 p.m. each month in the City of Bedford Council chambers located in the City of Bedford Municipal Building.

SUBSTANCES EXPECTED TO BE IN OUR DRINKING WATER SUPPLY

The City of Bedford Water Treatment System routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for detected contaminants for the period of January 1st to December 31st, 1999. We are allowed to monitor for certain regulated contaminants less often than once a year. Where this is applicable in the table, it will be noted. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l)-one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which , if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

FACTS & FIGURES

The City of Bedford Water Treatment System is required to test for over 75 constituents to make sure that the water you drink is safe. We are pleased to report that for the calendar year 1999, the water delivered to your homes and businesses complied with all state and federal requirements. The regulated constituents shown were detected in our finished drinking water as analyzed between January 1 and December 31, 1999. Finished water is the water that leaves our treatment plant and is distributed throughout the system.

Contaminant	Violation Y/N	Level Detected	Range	% Meeting Requirements	Units Measurement	MCL	MCLG	Likely Source of Contamination
1. Fluoride	N	0.9 Average	0.49 to 1.44		ppm	4	4	Erosion of natural deposits, water additive which promotes strong teeth
2. Turbidity	N	0.65	0.05 to 0.65	100%	NTU	1	N/A	Soil run off
3. Copper Sampled	N	0.082	< 0.020		ppm	AL =	1.3	Corrosion of

during the Months of Aug & Sept., 1998		90th Percentile, 1 of 20 samples exceeded action level to 2.790		1.3		household plumbing systems; erosion of natural deposits; leaching from wood preservatives
4. Lead Sampled during the months of Aug. & Sept., 1998	N	6 90th Percentile, 2 of 20 samples exceeded action level <1 to 90	ppb	AL = 15	0	Corrosion of household plumbing systems, erosion of natural depositis
5. Nitrate / Nitrite	N	"Stoney Creek Reservoir - 0.23 River & Resivoir - 0.22"	ppm	10	10	Runoff from fertilizer use, erosion of natural deposits
6. Gross Alpha	N	Wells & Reservoir 0.2 Reservoir only 12	pCi / L	5	0	Erosion of natural deposits
7. Chloroform	N	Wells & Reservoirs 16.4 River & Reservoir 26.2 Reservoir only 1.9	ppb	NR	NR	By-product of drinking water chlorination
8. Bromodichloromethane	N	Wells & Reservoir 3.5 River & Reservoir 2.8	ppb	NR	NR	By-oroduct of drinking water chlorination

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determine that your water is SAFE at these levels.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-428-4791).

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the City of Bedford Water Treatment System work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Please call our office if you have questions at 586-7197.

FOR YOUR INFORMATION

How will I know if there is a problem with my water?

If the amount of any substance exceeds limits, you would be notified through newspapers, radio, and/or other means. With notification, you will be instructed on what appropriate actions you can take to protect your family's health.

If I want more information who do I contact?

Water Plant business hours of operation are 8:00 a.m. - 4:00 p.m. and can be reached at 540-586-7197. You can call this number for an emergency 24 hours a day. There is always an operator on duty. Tours of our facility can be scheduled during normal business hours.

To report leaks and overflows

Call 540-586-7181 24 hours a day.

Customer Service

Call 540-586-7181 during the hours of 7:00 a.m. - 4:00 p.m.

Billing

Call 540-587-6047 during the hours of 8:30 a.m. and 4:30 p.m.

STEPS OF WATER TREATMENT

- **Coagulation:** Alum and other chemicals are added to water to form tiny sticky particles called "floc" which attract the dirt particles.
- **Flocculation:** Slow mixing to allow floc to get larger so it will gain weight and settle quicker.
- **Sedimentation:** The heavy particles (floc) settle to the bottom and clear water moves to filtration.
- **Filtration:** The water passes through filters that help to remove even smaller particles.
- **Disinfection:** A small amount of chlorine is added to kill any harmful bacteria or microorganisms that may be in the water.
- **Storage:** Water is pumped to a closed tank or reservoir where it flows through pipes to homes and businesses in the community.

The Virginia Department of Health, Office of Water Programs, City of Bedford's local regulatory agency, has reviewed this Water Quality Report and given acceptance for content and compliance to standards set for water quality reports